QC ABSTRACT

NAME OF WORK: Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	Cement	Fineness by dry sieving	One Test		1	1
		Finess by Air permeablity method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
		Compressive Strength	One Test		1	1
2	Coarse aggregate(40 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
3	Coarse aggregate(20 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
		Aggregate Impact Value	One Test		1	1
4	Fine aggregate	SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	Steel	Bend test	One Test		1	1
		Tensile Test	One Test		1	1
		Yield Test	One Test		1	1
		ReBend test	One Test		1	1
6	Precast (100mm)	Core Compressive Strength	One Test		1	1
		Corrected Cylinder Compressive Strength	One Test		1	1
		Equivalent Cube Compressive Strength	One Test		1	1
7	Precast (250mm)	Core Compressive Strength	One Test		1	1
		Corrected Cylinder Compressive Strength	One Test		1	1
		Equivalent Cube Compressive Strength	One Test		1	1

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8	RCC(M20)	Compressive Strength(7days and 28days)	6 sets /101-150 cum	135.4	12	12
9	RCC(M15)	Compressive Strength(7days and 28days)	1 set /1-5 cum	1.80	2	2
10	WMM	Sieve Analysis	One Test		1	1
		Impact Value	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
11	DBM	SIEVE ANALYSIS	One Test		1	1
		STRIPPING VALUE	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		IMPACT VALUE	One Test		1	1
		Specific gravity	One Test		1	1
		Water Absorption	One Test		1	1
		Marshal Stability	One Test		1	1
		Marshal flow	One Test		1	1
		Percent air Voids	One Test		1	1
		Percent Voids in mineral Aggregate	One Test		1	1
		Percent Voids filled with Bitumen	One Test		1	1
		Density	One Test		1	1
		Gradation	One Test		1	1
12	BC	SIEVE ANALYSIS	One Test		1	1
		STRIPPING VALUE	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		IMPACT VALUE	One Test		1	1
		Specific gravity	One Test		1	1
		Water Absorption	One Test		1	1
		Marshal Stability	One Test		1	1
		Marshal flow	One Test		1	1
		Percent air Voids	One Test		1	1
		Percent Voids in mineral	One Test		1	1
		Percent Voids filled with Bitumen	One Test		1	1
		Density	One Test		1	1
		Gradation	One Test		1	1
13	BITUMEN	Ductility	One Test		1	1
		Softening Point	One Test		1	1
		Penetration	One Test		1	1
		Flash Point	One Test		1	1
		Fire Point	One Test		1	1
14	TACK COAT	Rate of spread	One Test		1	1

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2023-06-26-24** **Date: 18-03-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP,
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer's Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	15-03-23
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 269:2015 Ordinary Portland cement Specification , IS 4031 (Part 4,5):1988 IS 4031 Part 1 (RA 2021) DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, (RA 2018) Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, (RA 2019) Determination of Soundness, Clause 5, Clause 6 IS 4031 Part 4, (RA 2019) Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, (RA 2019) Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11, (RA 2019)DETERMINATION OF DENSITY , Clause 6
Date of test	:	16-03-23
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 269:2015
1	Fineness by dry sieving (%)	2.55	–
2	Finess by Air permeablity method (m^2/kg,Min)	287.5	225m^2/kg, Min
3	Density (gm/cc)	3.12	–
4	Standard Consistency (%)	28.5%	Not specified
5	Initial Setting time	155 minutes	Not less than 30 minutes
6	Final Setting time	260 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	2mm	Not more than 10 mm

* The results obtained are satisfactory as per standard requirements.

Note:

The results pertain to the samples received and tested.

All information furnished by Agency/Representative

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2023-06-26-24** **Date: 13-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer's Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	15-03-23
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 269:2015 Ordinary Portland cement Specification , IS 4031 (Part 4,5):1988 IS 4031 Part 4, (RA 2019) Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, (RA 2019) Determination of Compressive Strength, Clause 6
Date of test	:	16-03-23
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 269:2015
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.0N/mm^2	Not less than 37 N/mm^2
3	28 Days	58.5N/mm^2	Not less than 53 N/mm^2

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2023-06-26-24** **Date: 18-03-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer's Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	15-03-23
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2021 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	15-03-23

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	319	319	2.1	97.9	90-100
3	20 mm	7455	7774	51.8	48.2	30-70
4	10 mm	5190	12964	86.4	13.6	10-35
5	4.75 mm	1660	14624	97.5	2.5	0-5
6	Pan	376	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2023-06-26-24** **Date: 18-03-23**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	8.1	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	7.5	
3	Specific Gravity	2.61	_
4	Bulk Density(Loose) (Kg/l)	1.38	_
5	Bulk Density(Compacted) (Kg/l)	1.42	_
6	Water Absorption(%)	0.25	_

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2023-06-26-24** **Date: 17-03-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	15-03-23
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2021 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	15-03-23

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	265	265	5.3	94.7	90-100
3	10 mm	2650	2915	58.3	41.7	25-55
4	4.75 mm	1600	4515	90.3	9.7	0-10
5	Pan	485	5000	100	0	_

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2023-06-26-24** **Date: 17-03-23**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	13.2	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.4	
3	Specific Gravity	2.65	–
4	Bulk Density(Loose) (Kg/l)	1.53	–
5	Bulk Density(Compacted) (Kg/l)	1.55	–
6	Water Absorption(%)	0.22	–
7	Aggregate crushing Value(%)	24.1	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	23.8	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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TEST REPORT OF FINE AGGREGATE

Lab ID	:	**CP-2023-06-26-24** **Date: 17-03-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer's Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	15-03-23
Sample Type	:	Fine Aggregate
Reference to BIS codes	:	IS 383 : 2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1, 3) RA2021 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
Date of test	:	15-03-23
Total weight taken	:	1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	32	32	3.2	96.8	90-100	90-100	90-100	95-100
3	2.36 mm	59	91	9.1	90.9	60-95	75-100	85-100	95-100
4	1.18 mm	241	332	33.2	66.8	30-70	55-90	75-100	90-100
5	600 micron	197	529	52.9	47.1	15-34	35-59	60-79	80-100
6	300 micron	193	722	72.2	27.8	5-20	8-30	12-40	15-50
7	150 micron	198	920	92.0	8.0	0-10	0-10	0-10	0-15
8	Pan	80	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2023-06-26-24** **Date: 17-03-23**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.5	_
2	Specific Gravity	2.59	_
3	Material finer than 75 micron(%)	8.0	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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TEST RESULTS OF STEEL

Lab ID	:	**CP-2023-06-26-24** **Date: 22-03-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer's Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	21-03-23
Sample Type	:	Sunvik
Reference to BIS codes	:	IS 1786-2008, IS:1608-2005(RA 2011), IS 1599-2019.
Date of test	:	21-03-23

Sl.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample	Yield stress	Tensile strength	Elongation	Bend test	Rebend test
			(mm)	(kg/m)	(N/mm2)	(N/mm2)	(%)		
1	Sunvik	Fe500	8	0.391	512	652	20.0%	Satisfactory	Satisfactory
2	Sunvik	Fe500	10	0.616	528	672	20.0%	Satisfactory	Satisfactory
3	Sunvik	Fe500	12	0.888	544	668	20.0%	Satisfactory	Satisfactory

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TEST REPORT OF PRECAST COVER SLAB

Lab ID	:	**CP-2023-06-26-24**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer's Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	06-04-23
Sample Type /Size	:	Precast Cover Slab -100mm thickness
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete
Date of test	:	06/04/2023
Grade of Slab	:	M15

Date: 10-04-23

Sl. No.	Identification Mark	Diameter of the core	Height of the core	Weight of the core	Area	Failure Load	Core Compressive strength	Corrected Cylinder Compressive strength	Equivalent Cube Compressive strength
		(mm)	(mm)	(kg)	(Sq.mm)	(KN)	(N/mm^2)	(N/mm^2)	(N/mm^2)
1	Cover Slab-1	77.51	100.48	1.129	4718	80.1	17.0	15.8	19.7
2	Cover Slab-2	77.48	100.51	1.118	4714	81.7	17.3	16.1	20.1
3	Cover Slab-3	77.50	100.49	1.127	4716	80.9	17.2	16.0	19.9

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TEST REPORT OF PRECAST COVER SLAB

Lab ID	:	**CP-2023-06-26-24**	**Date: 10-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.	
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09	
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005	
Customer's Reference	:	BBMP/EE/BTP/WO/158/2022-23	
Source of Sample	:	Sample supplied by Agency	
Sample Condition	:	Satisfactory	
Date of Receipt	:	06-04-23	
Sample Type /Size	:	Precast Cover Slab -250mm thickness	
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete	
Date of test	:	06/04/2023	
Grade of Slab	:	M15	

Sl. No.	Identification Mark	Diameter of the core	Height of the core	Weight of the core	Area	Failure Load	Core Compressive strength	Corrected Cylinder Compressive strength	Equivalent Cube Compressive strength
		(mm)	(mm)	(kg)	(Sq.mm)	(KN)	(N/mm^2)	(N/mm^2)	(N/mm^2)
1	Cover Slab-1	77.48	250.49	3.135	4714	81.1	17.2	16.0	20.0
2	Cover Slab-2	77.5	250.5	3.123	4716	80.7	17.1	15.9	19.9
3	Cover Slab-3	77.51	250.48	3.143	4718	81.9	17.4	16.1	20.2

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID	:	**CP-2023-06-26-24** **Date: 31/03/2023**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer's Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	27-03-23
Customer ID	:	Drain Bottom Raft Concrete
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M20 / 7 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	31/03/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft Concrete	M20	24/03/2023	31/03/2023	151.19 X 150.60 X 151.56	22770	8.493	410.0	18.0	18.1
2	Drain Bottom Raft Concrete	M20	24/03/2023	31/03/2023	150.98 X 150.53 X 149.02	22727	8.849	416.0	18.3	
3	Drain Bottom Raft Concrete	M20	24/03/2023	31/03/2023	149.16 X 151.30 X 150.22	22568	8.910	407.2	18.0	

* The results obtained are satisfactory as per standard requirements.

Note:

The results pertain to the samples received and tested.
All information furnished by Agency/Representative
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Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

CIVIL Pro Sig..... Date..... BANGALORE

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R RUDRAPRASAD
Authorized Signatory
Technical Manager

****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID	:	**CP-2023-06-26-24** **Date: 21/04/2023**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer's Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	27-03-23
Customer ID	:	Drain Bottom Raft Concrete
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M20 / 28 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	21/04/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm^2)	(N/mm^2)
1	Drain Bottom Raft Concrete	M20	24/03/2023	21/04/2023	150.65 X 149.86 X 151.71	22577	8.126	539.1	23.9	23.3
2	Drain Bottom Raft Concrete	M20	24/03/2023	21/04/2023	150.93 X 150.98 X 150.10	22788	8.475	518.3	22.7	
3	Drain Bottom Raft Concrete	M20	24/03/2023	21/04/2023	150.30 X 151.59 X 149.70	22783	8.569	530.6	23.3	

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Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

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Authorized Signatory
Technical Manager

****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-06-26-24** **Date: 03/04/2023**

Customer : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.

Address : Kodigehalli Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09

Agency : M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005

Customer's Reference : BBMP/EE/BTP/WO/158/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 29-03-23

Customer ID : Drain Bottom Raft Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 03/04/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm^2)	(N/mm^2)
1	Drain Bottom Raft Concrete	M20	27/03/2023	03/04/2023	151.10 X 151.09 X 150.84	22828	8.896	421.0	18.4	18.6
2	Drain Bottom Raft Concrete	M20	27/03/2023	03/04/2023	149.77 X 149.16 X 149.90	22340	8.613	413.6	18.5	
3	Drain Bottom Raft Concrete	M20	27/03/2023	03/04/2023	151.73 X 151.91 X 151.83	23049	8.590	434.0	18.8	

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Kodigehalli Sub Division
BBMP, Bangalore

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-06-26-24** **Date: 24/04/2023**

Customer : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.

Address : Kodigehalli Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09

Agency : M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005

Customer's Reference : BBMP/EE/BTP/WO/158/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 29-03-23

Customer ID : Drain Bottom Raft Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 24/04/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft Concrete	M20	27/03/2023	24/04/2023	149.32 X 151.64 X 149.76	22643	8.315	541.8	23.9	23.3
2	Drain Bottom Raft Concrete	M20	27/03/2023	24/04/2023	151.16 X 150.67 X 149.97	22775	8.123	522.2	22.9	
3	Drain Bottom Raft Concrete	M20	27/03/2023	24/04/2023	149.80 X 149.73 X 149.99	22429	8.710	519.4	23.2	

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Kodigehalli Sub Division
BBMP, Bangalore

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****End of Report****

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-06-26-24** **Date: 03/04/2023**

Customer : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.

Address : Kodigehalli Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09

Agency : M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005

Customer's Reference : BBMP/EE/BTP/WO/158/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 29-03-23

Customer ID : Drain Bottom Raft Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 03/04/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft Concrete	M20	27/03/2023	03/04/2023	151.21 X 150.46 X 151.78	22751	8.392	430.4	18.9	18.6
2	Drain Bottom Raft Concrete	M20	27/03/2023	03/04/2023	150.66 X 151.75 X 150.24	22862	8.835	411.8	18.0	
3	Drain Bottom Raft Concrete	M20	27/03/2023	03/04/2023	150.64 X 151.18 X 151.85	22772	8.607	427.5	18.8	

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Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

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Technical Manager

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID	:	**CP-2023-06-26-24** **Date: 24/04/2023**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer's Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	29-03-23
Customer ID	:	Drain Bottom Raft Concrete
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M20 / 28 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	24/04/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft Concrete	M20	27/03/2023	24/04/2023	151.76 X 151.04 X 149.63	22922	8.782	534.9	23.3	23.2
2	Drain Bottom Raft Concrete	M20	27/03/2023	24/04/2023	149.84 X 151.45 X 151.72	22694	8.807	517.7	22.8	
3	Drain Bottom Raft Concrete	M20	27/03/2023	24/04/2023	151.99 X 151.91 X 151.01	23089	8.835	538.8	23.3	

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BBMP, Bangalore

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-06-26-24** **Date: 06/04/2023**

Customer : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.

Address : Kodigehalli Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09

Agency : M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005

Customer's Reference : BBMP/EE/BTP/WO/158/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 01-04-23

Customer ID : Drain Side wall Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 06/04/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side wall Concrete	M20	30/03/2023	06/04/2023	151.56 X 150.01 X 150.36	22736	8.181	420.4	18.5	18.4
2	Drain Side wall Concrete	M20	30/03/2023	06/04/2023	150.64 X 150.61 X 150.34	22688	8.692	410.0	18.1	
3	Drain Side wall Concrete	M20	30/03/2023	06/04/2023	149.67 X 151.34 X 151.62	22652	8.315	421.3	18.6	

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Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID	:	**CP-2023-06-26-24** **Date: 27/04/2023**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer's Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	01-04-23
Customer ID	:	Drain Side wall Concrete
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M20 / 28 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	27/04/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side wall Concrete	M20	30/03/2023	27/04/2023	151.50 X 151.72 X 151.54	22984	8.486	540.9	23.5	23.2
2	Drain Side wall Concrete	M20	30/03/2023	27/04/2023	149.21 X 151.95 X 149.67	22673	8.901	512.8	22.6	
3	Drain Side wall Concrete	M20	30/03/2023	27/04/2023	151.46 X 150.74 X 151.51	22831	8.660	532.2	23.3	

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Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

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Technical Manager

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-06-26-24** **Date: 10/04/2023**

Customer : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.

Address : Kodigehalli Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09

Agency : M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005

Customer's Reference : BBMP/EE/BTP/WO/158/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 05-04-23

Customer ID : Drain Side wall Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 10/04/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm^2)	(N/mm^2)
1	Drain Side wall Concrete	M20	03/04/2023	10/04/2023	151.20 X 151.44 X 151.83	22898	8.342	420.9	18.4	18.5
2	Drain Side wall Concrete	M20	03/04/2023	10/04/2023	149.90 X 150.65 X 151.75	22583	8.919	409.7	18.1	
3	Drain Side wall Concrete	M20	03/04/2023	10/04/2023	151.14 X 149.50 X 149.62	22595	8.543	427.1	18.9	

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Assistant Executive Engineer
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BBMP, Bangalore

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Technical Manager

****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-06-26-24** **Date: 02/05/2023**

Customer : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.

Address : Kodigehalli Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09

Agency : M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005

Customer's Reference : BBMP/EE/BTP/WO/158/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 05-04-23

Customer ID : Drain Side wall Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 01/05/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side wall Concrete	M20	03/04/2023	01/05/2023	149.47 X 150.33 X 150.42	22469	8.954	529.2	23.6	23.3
2	Drain Side wall Concrete	M20	03/04/2023	01/05/2023	150.27 X 149.78 X 149.16	22508	8.842	512.0	22.7	
3	Drain Side wall Concrete	M20	03/04/2023	01/05/2023	149.82 X 150.34 X 149.01	22525	8.192	529.8	23.5	

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Technical Manager

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-06-26-24** **Date: 10/04/2023**

Customer : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.

Address : Kodigehalli Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09

Agency : M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005

Customer's Reference : BBMP/EE/BTP/WO/158/2022-23

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 05-04-23

Customer ID : Drain Side wall Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 10/04/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side wall Concrete	M20	03/04/2023	10/04/2023	150.22 X 149.04 X 151.26	22389	8.461	419.9	18.8	18.4
2	Drain Side wall Concrete	M20	03/04/2023	10/04/2023	149.19 X 151.95 X 150.35	22670	8.220	409.9	18.1	
3	Drain Side wall Concrete	M20	03/04/2023	10/04/2023	151.18 X 149.87 X 149.70	22658	8.594	415.3	18.3	

* The results obtained are satisfactory as per standard requirements.

Note:

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Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID	:	**CP-2023-06-26-24** **Date: 02/05/2023**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer's Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	05-04-23
Customer ID	:	Drain Side wall Concrete
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M20 / 28 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	01/05/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm^2)	(N/mm^2)
1	Drain Side wall Concrete	M20	03/04/2023	01/05/2023	150.97 X 151.99 X 151.74	22947	8.843	537.3	23.4	23.0
2	Drain Side wall Concrete	M20	03/04/2023	01/05/2023	150.45 X 149.11 X 150.09	22433	8.972	508.3	22.7	
3	Drain Side wall Concrete	M20	03/04/2023	01/05/2023	151.43 X 151.59 X 151.58	22955	8.763	528.5	23.0	

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Kodigehalli Sub Division
BBMP, Bangalore

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID	:	**CP-2023-06-26-24** **Date: 13/04/2023**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer's Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	08-04-23
Customer ID	:	RCC
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M15 / 7 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	13/04/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	RCC	M15	06/04/2023	13/04/2023	150.98 X 151.86 X 149.48	22929	8.758	432.0	18.8	18.8
2	RCC	M15	06/04/2023	13/04/2023	151.85 X 151.24 X 151.32	22966	8.636	431.1	18.8	
3	RCC	M15	06/04/2023	13/04/2023	149.85 X 150.22 X 150.88	22511	8.845	424.8	18.9	

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BBMP, Bangalore

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Date: 04/05/2023

Lab ID	:	**CP-2023-06-26-24**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer's Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	08-04-23
Customer ID	:	RCC
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M15 / 28 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	04/05/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	RCC	M15	06/04/2023	04/05/2023	151.93 X 149.70 X 149.19	22744	8.568	526.6	23.2	23.2
2	RCC	M15	06/04/2023	04/05/2023	151.84 X 150.91 X 149.69	22914	8.711	516.8	22.6	
3	RCC	M15	06/04/2023	04/05/2023	151.05 X 149.32 X 150.76	22554	8.946	537.3	23.8	

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Kodigehalli Sub Division
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TEST RESULTS OF GRADATION FOR WMM

Lab ID	:	**CP-2023-06-26-24** **Date: 20-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-23
Type of Mix	:	WMM (Wet Mix Macadam)
Date of Test	:	18-04-23
Oven Dry Weight	:	11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	318	318	2.9	97.1	95-100
22.4	2267	2585	23.5	76.5	60-80
11.2	2198	4783	43.5	56.5	40-60
4.75	2276	7059	64.2	35.8	25-40
2.36	1635	8694	79.0	21.0	15-30
0.6	625	9319	84.7	15.3	8-22
0.075	1341	10660	96.9	3.1	0-5

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TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID	:	CP-2023-06-26-24 **Date: 20-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-23
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of Test	:	18-04-23

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	300.2	300.2
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	73.9	74.0
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	225.9	225.8
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.4	0.4
5	Aggregate impact value	(B/A)*100	24.6	24.7
6	Aggregate impact value (Mean of two tests)	Pecentage	24.6	

* The results obtained are satisfactory as per standard requirements.

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-2023-06-26-24** **Date: 20-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-23
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of Test	:	18-04-23

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	12.5%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.9%	
Combined Flakiness and Elongation Index for WMM	25.4%	

* The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

TEST REPORT ON BITUMEN

Lab ID	:	**CP-2023-06-26-24** **Date: 20-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer's Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-23
Sample Type	:	Bitumen
Reference to BIS codes	:	IS: 1201-2021, IS: 1202-1220(1978) (Reaffirmed-2019)
Date of Test	:	18-04-23

Test Results

Sl.no	Name of Test	Result	Requirements as per IS:73-2013
1	Penetration at 25°C , in 1/10th mm	**62**	Min 45mm
2	Softening Point, °C	**51.6**	Min. 47°C
3	Ductility, cm	**98**	Min. 40cm
4	Flash point, °C	**294**	Min. 220°C
	Fire point, °C	**306**	

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TEST RESULTS OF GRADATION FOR DBM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2023-06-26-24**	**Date: 20-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.	
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09	
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005	
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23	
Source of Sample	:	Sample supplied by Agency	
Sample Condition	:	Satisfactory	
Date of Receipt	:	18-04-23	
Type of Mix	:	DBM-Plant (Dense Bituminous Macadam)	
Date of Test	:	18-04-23	
Weight of Sample	:	5000 Grams	

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-10 (grading -2)
37.5	0	0	0	100	100
26.5	254	254	5.08	94.92	90-100
19	345	599	11.98	88.02	71-95
13.2	458	1057	21.14	78.86	56-80
4.75	1755	2812	56.24	43.76	38-54
2.36	405	3217	64.34	35.66	28-42
0.3	1328	4545	90.90	9.10	7-21
0.075	255	4800	96.00	4.00	2-8
PAN	200	5000	0.00	0	0

* The results obtained are satisfactory as per standard requirements.

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PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR DENSE BITUMINOUS MACADAM

Lab ID	:	**CP-RW-2023-06-26-24**	**Date: 21-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.	
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09	
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005	
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23	
Source of Sample	:	Sample supplied by Agency	
Sample Condition	:	Satisfactory	
Date of Receipt	:	18-04-23	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Date of Test	:	18-04-23	

Table 500-6 : Physical Requirements fo Coarse Aggregate for Dense Bituminous Macadam

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	13.0	Combined Flakiness & Elongation Index for DBM is Maximum 35%	IS:2386 Part I
	Elongation Index	10.0		
Strength	Aggregate Impact Value	19.0	Maximum 30%	IS:2386 Part IV
Specific gravity	Specific gravity	2.58	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.38	Maximum 2%	IS:2386 Part III

* The results obtained are satisfactory as per standard requirements.

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TESTS RESULTS ON STABILITY OF MIX

Lab ID	:	**CP-RW-2023-06-26-24** **Date: 21-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Hot Mix Plant, Bangalore
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-23
Type of Mix	:	DBM (Dense Bituminous Mecadam)
Date of Test	:	18-04-23

The results of the tests conducted on the Dense Bituminous Macadam mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.29	11.82	9KN(Min)
2	Marshal flow at 60°C, mm	3.54	3.87	2-4
3	Percent air Voids	4.56	4.17	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.54	14.76	13-15
5	Percent Voids filled with Bitumen(VFB %)	68.98	70.28	65-75
6	Density, g/cc	2.42	2.40	–

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID	:	**CP-RW-2023-06-26-24** **Date: 21-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-23
Type of Mix	:	DBM(Dense Bitumnous Macadam)
Date of Test	:	18-04-23

Type of Binder	:	60/70
% of Binder Used	:	4.5%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	9.0 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.0	2.0	98.2	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

* The results obtained are satisfactory as per standard requirements.

Note:-
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Kodigehalli Sub Division
BBMP, Bangalore

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Technical Manager

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR DBM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2023-06-26-24**	**Date: 25-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.	
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09	
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005	
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23	
Source of Sample	:	Sample supplied by Agency	
Date of Receipt	:	24-04-23	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Date of Test	:	24-04-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	479.5	479
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	4.5	4.60
7	Average percentage	%	4.55	

Assistant Executive Engineer
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Lab ID : CP-RW-2023-06-26-24 Date: 25-04-23

AFTER EXTRACTION(Trail-1)

Weight of Sample(gm) : 479.5

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH specification Table 500-10(grading -2)
37.5	0	0	0.0	100.0	100
26.5	0	0	0.0	100.0	90-100
19	51	51	10.6	89.4	71-95
13.2	55	106	22.1	77.9	56-80
4.75	182	288	60.1	39.9	38-54
2.36	44	332	69.2	30.8	28-42
0.3	69	401	83.6	16.4	7-21
0.075	55	456	95.1	4.9	2-8

AFTER EXTRACTION(Trail-2)

Weight of Sample(gm) : 479

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH specification Table 500-10(grading -2)
37.5	0	0	0.0	100.0	100
26.5	0	0	0.0	100.0	90-100
19	53	53	11.1	88.9	71-95
13.2	79	132	27.6	72.4	56-80
4.75	122	254	53.0	47.0	38-54
2.36	77	331	69.1	30.9	28-42
0.3	67	398	83.1	16.9	7-21
0.075	62	460	96.0	4.0	2-8

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TEST RESULTS OF GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2023-06-26-24**	**Date: 20-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.	
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09	
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005	
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23	
Source of Sample	:	Sample supplied by Agency	
Sample Condition	:	Satisfactory	
Date of Receipt	:	18-04-23	
Type of Mix	:	BC-Plant (Bituminous Concrete)	
Date of Test	:	18-04-23	
Oven Dry Weight	:	5000 Grams	

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-17(grading-2)
19	0	0	0.0	100.0	100
13.2	87	87	1.7	98.3	90-100
9.5	707	794	15.9	84.1	70-88
4.75	884	1678	33.6	66.4	53-71
2.36	585	2263	45.3	54.7	42-58
1.18	495	2758	55.2	44.8	34-48
0.6	515	3273	65.5	34.5	26-38
0.3	543	3816	76.3	23.7	18-28
0.15	475	4291	85.8	14.2	12-20
0.075	365	4656	93.1	6.9	4-10
PAN	344	5000	100	0.0	0

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TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID	:	**CP-RW-2023-06-26-24** **Date: 21-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-23
Type of Mix	:	BC(Bitumenous Concrete)
Date of Test	:	18-04-23

Type of Binder	:	60/70
% of Binder Used	:	5.4%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	10.8 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.5	1.5	98.3	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

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PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR BITUMINOUS CONCRETE

Date: 21-04-23

Lab ID	:	**CP-RW-2023-06-26-24**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-23
Type of Mix	:	BC (Bituminous Concrete)
Date of Test	:	18-04-23

Table 500-16 : Physical Requirements fo Coarse Aggregate for Bituminous Concrete

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	12.4	Combined Flakiness & Elongation Index for BC is Maximum 35%	IS:2386 Part I
	Elongation Index	11.8		
Strength	Aggregate Impact Value	22.1	Maximum 24%	IS:2386 Part IV
Specific gravity	Specific gravity	2.68	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.21	Maximum 2%	IS:2386 Part III

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TESTS RESULTS ON STABILITY OF MIX

Lab ID	:	**CP-RW-2023-06-26-24** **Date: 21-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23
Source of Sample	:	Hot Mix Plant, Bangalore
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-23
Type of Mix	:	BC (Bituminous Concrete)
Date of Test	:	18-04-23

The results of the tests conducted on the Bituminous Concrete mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.14	11.13	10KN(min)
2	Marshal flow at 60°C, mm	3.52	3.51	2-4
3	Percent air Voids	4.82	4.83	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.28	14.26	13-15
5	Percent Voids filled with Bitumen(VFB %)	71.87	71.63	65-75
6	Density, g/cc	2.25	2.26	–

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	**CP-RW-2023-06-26-24**	**Date: 27-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.	
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09	
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005	
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23	
Source of Sample	:	Sample supplied by Agency	
Date of Receipt	:	26-04-23	
Type of Mix	:	BC (Bituminous Concrete)	
Date of Test	:	26-04-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	475	474.5
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1}$ X 100	5.40	5.50
7	Average percentage	%	5.45	

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Lab ID : CP-RW-2023-06-26-24 Date: 27-04-23

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 475

IS Sieve Size (mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	8	8	1.7	98.3	90-100
9.5	64	72	15.2	84.8	70-88
4.75	116	188	39.6	60.4	53-71
2.36	81	269	56.6	43.4	42-58
1.18	28	297	62.5	37.5	34-48
0.6	33	330	69.5	30.5	26-38
0.3	46	376	79.2	20.8	18-28
0.15	31	407	85.7	14.3	12-20
0.075	33	440	92.6	7.4	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 474.5

IS Sieve Size (mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	7	7	1.5	98.5	90-100
9.5	67	74	15.6	84.4	70-88
4.75	119	193	40.7	59.3	53-71
2.36	71	264	55.6	44.4	42-58
1.18	27	291	61.3	38.7	34-48
0.6	48	339	71.4	28.6	26-38
0.3	40	379	79.9	20.1	18-28
0.15	35	414	87.2	12.8	12-20
0.075	29	443	93.4	6.6	4-10

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End of Report

DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID	:	**CP-RW-2023-06-26-24** **Date: 27-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23
Sample Condition	:	Satisfactory
Date of Receipt	:	26-04-23
Type of Mix	:	Tack coat
Date of Test	:	26-04-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.803	0.771
5	Weight of tack Coat (d=c-b)	Kg	0.023	0.023
6	Rate of spread of tack coat	Kg/sq.m	0.256	0.256
7	Average	Kg/sq.m	0.256	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

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End of Report

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	CP-RW-2023-06-26-24	Date: 29-04-23
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.	
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09	
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005	
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23	
Source of Sample	:	Sample supplied by Agency	
Date of Receipt	:	28-04-23	
Type of Mix	:	BC (Bituminous Concrete)	
Date of Test	:	28-04-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	474	475
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	5.60	5.40
7	Average percentage	%	5.50	

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Lab ID : **CP-RW-2023-06-26-24** **Date: 29-04-23**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 474

IS Sieve Size (mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	10	10	2.1	97.9	90-100
9.5	67	77	16.2	83.8	70-88
4.75	112	189	39.9	60.1	53-71
2.36	82	271	57.2	42.8	42-58
1.18	33	304	64.1	35.9	34-48
0.6	34	338	71.3	28.7	26-38
0.3	45	383	80.8	19.2	18-28
0.15	22	405	85.4	14.6	12-20
0.075	39	444	93.7	6.3	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 475

IS Sieve Size (mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	9	9	1.9	98.1	90-100
9.5	69	78	16.4	83.6	70-88
4.75	116	194	40.8	59.2	53-71
2.36	75	269	56.6	43.4	42-58
1.18	33	302	63.6	36.4	34-48
0.6	23	325	68.4	31.6	26-38
0.3	40	365	76.8	23.2	18-28
0.15	39	404	85.1	14.9	12-20
0.075	48	452	95.2	4.8	4-10

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End of Report

DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID	:	**CP-RW-2023-06-26-24** **Date: 29-04-23**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads, Drains and Construction of Culverts at Hoodi Layout and Surrounding in ward no. 09
Agency	:	M/s S.S Road Developers, Prop.A.S Mani, No:2/2, 1st Cross, B.S.A Road, Frezer Town , Bangalore-560005
Customer Reference	:	BBMP/EE/BTP/WO/158/2022-23
Sample Condition	:	Satisfactory
Date of Receipt	:	28-04-23
Type of Mix	:	Tack coat
Date of Test	:	28-04-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.802	0.77
5	Weight of tack Coat (d=c-b)	Kg	0.022	0.022
6	Rate of spread of tack coat	Kg/sq.m	0.244	0.244
7	Average	Kg/sq.m	0.244	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

Note:-

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